REMARKS

In this Response, Applicants amend claims 8, 16-18, 20, 26, 33, 41-43, 45, and 77-87. No new matter has been added. Claims 8-12, 15-18, 20, 22, 26-30, 33-37, 40-43, 45, 47, 52-67, and 77-87 are currently pending, of which claims 8, 15, 20, 26, 33, 40, and 45 are independent. Applicants respectfully submit that all of the pending claims are in condition for allowance.

Applicants thank the Examiner for withdrawing the §101 rejection and the §103 rejection. Accordingly, only §112 rejections remain. Applicants believe that the above amendments and remarks below overcome the §112 rejections, and accordingly respectfully request that the Examiner pass the pending claims to allowance.

I. Claim Rejection under 35 U.S.C. § 112

Claims 8-12, 15-18, 20, 22, 26-30, 33-37, 40-43, 45, 47, 52-67, and 77-87 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement (Office Action, page 6). Applicants respectfully traverse the 35 U.S.C. § 112, first paragraph, rejection of claims 8-12, 15-18, 20, 22, 26-30, 33-37, 40-43, 45, 47, 52-67, and 77-87 as set forth below.

The Examiner specifically objects to the following three phrases of the claims: *a first set of data that represents a first state of the plurality of chemical substances*; *transforming the first set of data into a second set of data representing a second state of the plurality of chemical substances*; and *a layered hierarchy comprising a plurality of hierarchical levels, at least one hierarchical level formed by creating at least one subsystem in the constructed model, each subsystem formed by representing a plurality of blocks of the model as a single block in the constructed model*. Each of these phrases is addressed below.

The Examiner indicates that support a first set of data and transforming the first set of data cannot be found in the Specification as filed. While Applicants respectfully disagree, Applicants amend claims 8, 20, 26, 33, and 45 herein to remove the reference to the first set of data and the transformation of the first set of data. The claims are further amended to recite transmitting "a result of the simulation" or "the generated dynamic behavior," rather than "the second set of data." Support for these features can be found in the claims as originally filed. For

clarity, Applicants also add the phrase *the simulating accepting the constructed model of the biological process as input and generating dynamic behavior of the constructed model as output.* Support for this claim feature can be found at least in originally filed claim 1.

The Examiner also argues, at page 4 of the Office Action, that while there is support in the Specification for "layers of hierarchy," there is no support for *a plurality of hierarchical levels, at least one hierarchical level formed by creating at least one subsystem in the constructed model, each subsystem formed by representing a plurality of blocks of the model as a single block in the constructed model.* Applicants respectfully disagree.

The paragraph beginning at page 16, line 13 states:

> Using this textual interface, users may write special scripts that perform automatic editing operations on the block diagram. A user generally interacts with a set of *windows* that act as canvases for the model. There can be more than one window for a model because models may be partitioned into multiple hierarchical levels through the use of subsystems (discussed further below).

The paragraph beginning at page 21, line 12 states:

> Modularity may be achieved in a block diagram by layering the block diagram through the use of subsystems. A subsystem facilitates layering by allowing a collection of blocks to be represented by a single block with input and output signals. The input and output signals of the subsystem are accessible to the constituent blocks within the subsystem. A subsystem is a virtual subsystem if its constituent blocks are moved back into the main block diagram model during the model's execution ...
>
> As noted previously, to facilitate modeling fairly large and complex dynamic systems, users may be allowed to layer block diagrams. A subsystem facilitates such layering by allowing a collection of blocks to be represented by a single block with input and output signals. The input and output signals of the subsystem are accessible to its constituent blocks. By nesting subsystems within each other, one can create block diagrams with arbitrary layers of hierarchy.

Applicants respectfully submit that these passages provides support for the recited claim features.

Specifically, the claim recites *a layered hierarchy comprising a plurality of hierarchical levels*. Page 16, lines 15-16 state that "there can be more than one window for a model because models may be partitioned into multiple hierarchical levels through

the use of subsystems." Page 21, lines 26-27 note that "by nesting subsystems within each other, one can create block diagrams with arbitrary layers of hierarchy."

The claim further recites *at least one hierarchical level formed by creating at least one subsystem in the constructed model.* Page 16, lines 15-16 states "there can be more than one window for a model because models may be partitioned into multiple hierarchical levels through the use of subsystems." Page 21, lines 26-27 states "By nesting subsystems within each other, one can create block diagrams with arbitrary layers of hierarchy."

Further, the claim recites *each subsystem formed by representing a plurality of blocks of the model as a single block in the constructed model.* Page 21, lines 23-25 state "a subsystem facilitates such layering by allowing a collection of blocks to be represented by a single block with input and output signals."

Claims 16-18, 41-43, and 77-87 are also rejected under 35 U.S.C. §112, second paragraph. The Examiner indicates that the claims recite "the article of manufacture" of their respective parent claims, whereas the respective parent claims recite a "computer-readable medium." Applicants amend claims 16-18, 41-43, and 77-87 herein to recite the "computer-readable medium" of their respective parent claims.

Accordingly, in view of the above, Applicants respectfully submit that the Specification provides support for the claims, and respectfully requests that the 35 U.S.C. §112 rejections be reconsidered and withdrawn.

CONCLUSION

In view of the above remarks, Applicants believe that the pending application is in condition for allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicants' attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-108RCE3. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. § 1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: May 3, 2010

Respectfully submitted,

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